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THE THRESHOLD OF MOTHERHOOD

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THE THRESHOLD OF MOTHERHOOD

A HANDBOOK
FOR THE PREGNANT WOMAN

BY

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PREFACE

THERE are many excellent text-books of Midwifery for students, doctors and nurses, but few if any exist for the exclusive use of the most important person—the patient.

To-day is the Day of Enlightenment in all things sexual, and such is as it should be. The Mohammedan conceptions of woman's estate, adhered to throughout the Victorian age, have died a natural death. To-day it is generally accepted, perhaps grudgingly enough by many, that woman is the equal of man. She enters politics, reads for the bar, sits on juries, and fills countless other highly responsible positions. Yet the average pregnant woman is surprisingly ignorant concerning the circumstances attending her present and future state. In the succeeding pages, an attempt has been made to explain the various phenomena which occur during the successive stages of a normal pregnancy and those functional disturbances which are likely to occur. It has been the writer's object to avoid all unnecessary technicalities, and any such terms which have been thought necessary to

introduce for clearness of description are fully explained in the text.

Particular stress has been laid on the preparations for the confinement and the necessity for being fully prepared beforehand, in order to obviate the state of chaos which is unfortunately only too prevalent at that time.

R. DOUGLAS HOWAT.

DENHOLM, *September*, 1921.

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INTRODUCTORY

Valetudo sustentatur notitia sui corporis.
Cic. *De Officiis.*

"Health is obtained by knowledge of one's own constitution."

The man who first penned this truism died in the year B.C. 43. Yet although this obvious axiom was recognised two thousand years ago, the average layman of to-day is more or less completely ignorant of human physiology. It is an indisputable fact that nine out of ten women when they become pregnant show an appalling lack of knowledge concerning their condition.

It is extraordinary, though none the less a fact, that Midwifery has throughout generations been surrounded by an impenetrable wall of mystery and fear. The weird superstitions and beliefs, which have throughout ages become attached to that very natural period of a woman's existence, would, if compiled in the form of a novel, outrival Poe at his best.

Latter day ignorance concerning the period of gestation (*i.e.* pregnancy) owes its origin no doubt to motives of false prudery, a vicious remnant of our Victorian ancestry which has survived the ravages of modern thought and education.

At one period of history the practice of obstetrics was largely in the hands of unqualified persons whose services were employed mostly to obtain the use of their impedimenta, without which it was believed a confinement could not be successfully carried out. Such apparati usually took the form of specially constructed chairs and stools, devised so that the woman might maintain what was considered by the accoucheur to be the most suitable position during the delivery of her child. Although midwifery stools are stated to be still in use amongst the lower classes in some parts of the Continent, with the advance of science they became obsolete, and such relics of barbarity were consigned to their proper place—the museum. The "Sarah Gamps," however, still continued to flourish for many generations, but their surgical interference was chiefly restricted to cutting and tying the baby's cord after delivery and "redding-up" the mother and the bed. These "handy women," as they were popularly called, were for the most part illiterate creatures usually of humble origin and possessing no knowledge whatsoever of personal cleanliness. Most of them claimed the title of midwife solely by reason of having witnessed previous confinements. Yet they had the confidence of the ignorant, from whom they exacted a fee for their (*sic*) services, and in some parts of Scotland they are still regarded with favour by the women of a certain class. In their ignorance, they regarded aseptic midwifery with its insistence on soap and water with unfeigned contempt, and often handled their patients with filthy hands and nails. Possessing no obstetrical knowledge whatsoever, they could

neither examine the patient nor offer her any real assistance. I have met one of these women, who did not even know what a " temperature " was, and did not know the use of a clinical thermometer. One has no doubt that many hundreds of unfortunate women have died in childbirth as a direct result of the unwashed attentions of these creatures. Fortunately, no doubt realising the serious menace to the community at large, the medical profession in this country for once showed a unanimous front, and as a result the Scottish Midwives Bill was passed in 1915. By its terms the unskilled handy-wife was prohibited, under a penalty, from taking a fee, and thus the majority of Sarah Gamps had to select another vocation.

Women are apt to forget that Motherhood is the most natural of all conditions. The maintenance of the individual and the reproduction of the species define the essential object of life, and what is regarded by many with dread as being little better than a surgical operation is no more than the natural function which pertains to everything that lives and breathes.

The whole subject of Midwifery may be summed up in two words—Cleanliness and Common-sense ; and these should be the watchwords of every expectant mother.

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I

A BRIEF SURVEY OF SEXUAL PHYSIOLOGY

Hominum genus in sexu consideratur.

Cic. *Inv.* 1. 24. 35.

"The human race is considered in respect of sex."

This subject alone could fill an entire volume, but it is only necessary to give here a simple explanation of those phenomena which constitute the milestones of a woman's sexual life, and in particular those essential processes which precede gestation. A woman's sexual life, in so far as her reproductive powers are concerned, commences at puberty and ends at the menopause.

Puberty is the period which represents the transition from girlhood to womanhood, and normally is marked by the onset of menstruation. The whole body fills out and becomes plumper, and the angularity of immature girlhood gives place to a more rounded contour. The genital organs commence to mature. Puberty, as represented by the commencement of menstruation, is most common in this country between the ages of fourteen and sixteen years, although the author has known of cases where menstruation has commenced as early as the eleventh year and has frequently observed others as late as

the eighteenth, nineteenth and twentieth years. These cases, of course, are to be regarded as exceptional. The age at which puberty usually occurs varies in different parts of the world. Generally speaking, puberty occurs earlier in tropical countries than in moderate climates and correspondingly later in the extreme North and South. Although climate and race undoubtedly play a prominent part, the conditions under which a girl is brought up also have an important bearing on determining the date of onset. It has been stated that Eskimo girls, living as they do in a climate where the thermometer registers many degrees below zero, arrive at puberty as early as from ten to thirteen years. The explanation given is that they protect their bodies, when outside, by wrapping themselves in layers of fur and keep the interior of their dwellings so greatly over-heated that they have to strip nearly naked while indoors. It may therefore be safely assumed that they never experience the rigors of their climate, and that they live, in fact, under more or less tropical conditions. In regard to social conditions, it is said that girls brought up amidst comfort and luxury arrive at puberty earlier than their less fortunate sisters in the poorer hard-working classes. Early sexual stimulation is said to produce early puberty, but this is extremely doubtful. The precocious arousing of the sexual appetite is probably a manifestation of the actual presence of puberty.

The Menopause or Climacteric, as it is sometimes called, is that change of life which normally occurs in women between the age of forty-five and fifty years, and is marked by the cessation of menstruation.

The menopause quite frequently occurs earlier than forty-five, and it is occasionally delayed beyond the age of fifty. It is accepted as a general rule that if menstruation commenced late in life it will cease earlier, and *vice versa*, if it commenced early it will end late. Frequently the menopause is associated with symptoms of ill-health. Headaches, flushings and numerous nervous symptoms are complained of. The body undergoes a change. There is a general tendency to adiposity, and in some cases hair may grow on the face and an appearance of masculinity may be assumed. In women who are not living in the connubial state the external genital organs become shrunken and withered.

In regard to the object of menstruation in women many theories have been propounded, but as yet none has been able to fully fit in with all the facts. It is, however, generally accepted that menstruation and ovulation (*i.e.* the production of eggs) are related to one another, but to what extent yet remains to be proved.

Menstruation consists of a periodic sanguinous discharge commencing at puberty and ceasing at the menopause. Accompanying the discharge are certain symptoms which are not invariably present in every case. There is a variable amount of pain felt in the abdomen over the ovaries accompanied by a feeling of weight, a tired full sensation between the legs, fulness of the breasts, headache and a feeling of general discomfort. These symptoms are, as a rule, more aggravated at the commencement of a period, and wear off as the discharge, scanty to commence with, becomes more profuse. The quantity is not

easily estimated. A diaper, as a rule, when fully used, holds approximately half an ounce. The normal amount lost during an entire period is said to be from four to five ounces. At puberty the amount is variable, but once menstruation is definitely established, the quantity lost should be more or less the same every period. The duration of a period varies greatly amongst women as does the discharge or "loss" as it is termed. About four to five days is the usual duration, though many women remain unwell for seven days. To extend over seven days, however, is not normal, but indicates a deviation from health.

In regard to recurrence, many women are very regular and know to a day when they will next be "unwell," while others again are irregular. The commonest type of menstruation is that which recurs every four weeks (twenty-eight days), less common is that which occurs every thirty days, while a few women menstruate every three weeks. One has met with cases where menstruation has occurred regularly every fortnight and lasted for three days. These deviations, although they can scarcely be regarded as normal in the ordinary sense, are not necessarily indications of ill-health, but are normal to certain individuals.

Conception means the fertilisation of an *ovum* or egg in the womb. In order to understand the process a brief explanation of the arrangement of the female reproductive organs is necessary. The *uterus* or womb is a hollow pear-shaped organ connected with the outside of the body by a passage wide at the top and narrow below termed the *vagina*. The entrance

from the vagina into the uterus is by a very narrow passage called the *os*. The entrance to the vagina from the outside of the body is, in the virginal state, almost entirely closed by a thin sheet of tissue called the *hymen*. The hymen is excluded from view by two pairs of lips. The inner pair are small and thin, whereas the outer pair are larger and thicker, and protrude between the legs, constituting the External Genitals. The two "ovaries"—the organs which produce the "ova" or eggs—are situated one on either side of the uterus on the *Broad Ligaments*, which hold the uterus in position. Each ovary is connected with the uterus by a hollow tube (the *Fallopian Tubes*). These tubes open into the uterus, one on either side, at its upper end. An ovum or egg is produced in an ovary and travels along the Fallopian Tube until it reaches the cavity of the uterus, which under normal circumstances it enters and comes to rest on one of its sides. After coitus has taken place one of the active organisms (a *spermatozoon*) in the male seminal fluid passes from the vagina through the small opening at the top end (the *os*) into the uterus and penetrates the egg. The egg is now fertilised, and this fertilised egg is the germ of the future baby. Throughout the nine months of pregnancy this egg goes through a series of changes, and ultimately issues forth from the womb as a living breathing child.

II

CALCULATION OF THE PROBABLE DATE OF CONFINEMENT

The first manifestation of pregnancy is usually cessation of the menstrual discharge. While accepting this as a general rule, it has to be borne in mind that it is by no means invariable, as there have been cases where women have continued to menstruate for several periods after conception has taken place. There are also cases on record where menstruation has continued up to full time, that is to say, throughout the whole nine months of pregnancy.

If a woman misses a menstrual period and has reason to believe that she may be pregnant, she should at once mark on a calendar, which should be carefully preserved, the date of the *first* day of her *last* menstrual period. If only women would make a point of doing this much needless confusion and expense could be avoided. It is impossible for a doctor to calculate the possible date of confinement with any degree of accuracy if the woman cannot give him the date when she last commenced to be unwell. One cannot emphasise too strongly the importance of accuracy in this matter, as at the best one can only give an *approximate* date, which in the

case of first babies frequently turns out to be in advance of the actual event, but it is a great deal safer to have the error on the right side. The doctor should be engaged early in the pregnancy in order to be sure of obtaining his services when required. He should be asked to give an approximate date for the confinement. If a nurse is being engaged, she should be engaged from one week in advance of the calculated date.

The accompanying table has been found by the author to be the most satisfactory in making the calculation, but it must be remembered that the dates given in it are only approximate. They are the dates which *normally* should represent the day of confinement. The average duration of pregnancy is nine calendar months or 280 days. First babies, however, frequently delay beyond the 280 days, whereas women who have previously borne a child may be confined well within that period.

In reading the table it will be noticed that there are twelve horizontal columns and that each column consists of two lines of figures. The top line of each column represents the date of the first day of the last menstrual period. The bottom line gives the approximate date of confinement. Take, as an example, the first pair of figures in the top column. If a pregnant woman's last menstrual period commenced on 1st January, then, all going well, she will be confined on or about 8th October. If the last period commenced on 2nd January, then the confinement will be on or about 9th October, and so on.

OBSTETRIC TABLE

The Calculation is made from the First Day of the Last Menstrual Period

January *October*	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31	25 1	26 2	27 3	28 4	29 5	30 6	31 7	January *November*
February *November*	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 1	25 2	26 3	27 4	28 5			February *December*
March *December*	1 6	2 7	3 8	4 9	5 10	6 11	7 12	8 13	9 14	10 15	11 16	12 17	13 18	14 19	15 20	16 21	17 22	18 23	19 24	20 25	21 26	22 27	23 28	24 29	25 30	26 31	27 1	28 2	29 3	30 4	31 5	March *January*
April *January*	1 6	2 7	3 8	4 9	5 10	6 11	7 12	8 13	9 14	10 15	11 16	12 17	13 18	14 19	15 20	16 21	17 22	18 23	19 24	20 25	21 26	22 27	23 28	24 29	25 30	26 31	27 1	28 2	29 3	30 4		April *February*
May *February*	1 5	2 6	3 7	4 8	5 9	6 10	7 11	8 12	9 13	10 14	11 15	12 16	13 17	14 18	15 19	16 20	17 21	18 22	19 23	20 24	21 25	22 26	23 27	24 28	25 1	26 2	27 3	28 4	29 5	30 6	31 7	May *March*
June *March*	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31	25 1	26 2	27 3	28 4	29 5	30 6		June *April*
July *April*	1 7	2 8	3 9	4 10	5 11	6 12	7 13	8 14	9 15	10 16	11 17	12 18	13 19	14 20	15 21	16 22	17 23	18 24	19 25	20 26	21 27	22 28	23 29	24 30	25 1	26 2	27 3	28 4	29 5	30 6	31 7	July *May*
August *May*	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31	25 1	26 2	27 3	28 4	29 5	30 6	31 7	August *June*
September *June*	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 1	25 2	26 3	27 4	28 5	29 6	30 7	September *July*
October *July*	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31	25 1	26 2	27 3	28 4	29 5	30 6	31 7	October *August*
November *August*	1 8	2 9	3 10	4 11	5 12	6 13	7 14	8 15	9 16	10 17	11 18	12 19	13 20	14 21	15 22	16 23	17 24	18 25	19 26	20 27	21 28	22 29	23 30	24 31	25 1	26 2	27 3	28 4	29 5	30 6		November *September*
December *September*	1 7	2 8	3 9	4 10	5 11	6 12	7 13	8 14	9 15	10 16	11 17	12 18	13 19	14 20	15 21	16 22	17 23	18 24	19 25	20 26	21 27	22 28	23 29	24 30	25 1	26 2	27 3	28 4	29 5	30 6	31 7	December *October*

III

THE CARE OF PREGNANCY

DURING pregnancy frequent or very hot baths should be rigorously avoided by all, and more especially by women who have had a previous miscarriage. At the same time it is essential that the whole body should be cleansed daily by washing with soap and warm water, otherwise the pores get clogged and the skin is unable to exercise its important function of getting rid of the waste products from the blood. The genital organs, in particular, must be included in the general cleansing, and should be bathed with luke-warm water and a simple non-irritating soap, preferably one prepared from an olive-oil basis such as the Castile brand, which is manufactured by several firms. Vaginal douching, that is, syringeing the vagina with fluids, is to be strictly prohibited. At one time the practice of douching was much advocated. It was argued that it could not be conducive to cleanliness to permit the natural secretions to have their way, and syringeing of the vagina was practised with disastrous results. The very object aimed at was defeated. With the advance of science, it has been shown that the vaginal secretion during pregnancy is more or less a *natural* antiseptic, and is absolutely

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essential to the health of the confinement. At no time can douching be recommended to a woman with a normal healthy uterus and vagina. It is a totally erroneous impression that the vagina requires to be "kept clean"; the outer parts of the sexual organs—most certainly, but leave the internal parts alone. They are quite able to look after themselves, as they are specially functioned to do so. It may be mentioned that the vagina of a healthy woman is an infinitely cleaner and purer cavity than that same woman's mouth with all the germs of dental decay, to say nothing of the millions of active micro-organisms that can be swabbed off a normal throat, tongue and gums.

The importance of keeping the bowels open cannot be too strongly emphasised. A daily evacuation is essential to comfort and to the maintenance of good health. No person can expect to remain healthy if the bowels are allowed to remain clogged with waste matter, as happens in constipation. The matter which is passed in the daily motion (*faeces*) is the debris of food-stuffs consumed and is of no further use to the body. If this debris is allowed to remain in the bowel, the *toxins* or poisons are absorbed from it into the body, where they produce among the least harmful symptoms a feeling of weight and lassitude, biliousness and headaches. The large majority of troubles and aches complained of by women nowadays find their origin in this cause. The daily evacuation of the contents of the bowel is a cultivable habit, which, if neglected, invariably results in bad health. In the case of the expectant mother it is essential that every effort should be made to maintain

regularity. To aid in this, a little cold water should be drunk on waking in the morning and last thing at night. Where constipation threatens, the daily diet should include a liberal supply of fluids. Soups, green vegetables and fruits, both fresh and stewed, all help to promote regularity of the bowels. Should an initial dose of medicine be necessary, great care must be taken in the choice of the drug. All active purgatives are forbidden, including castor-oil and salts (excepting the milder forms of " Health Salts "). Mild preparations of Liquorice and Cascara are the safest to rely on. In regard to the dose, it is entirely a matter of individual habit and condition.

Throughout pregnancy a moderate amount of exercise is necessary, but at no time is it advisable that a woman should do more than she is competently able for. Over-fatigue must be avoided. The pregnant woman must realise that the average woman of to-day attempts far more than our female ancestors would even have dreamed of. Whatever her former views may have been in regard to the physical equality of sex, once she is in the pregnant state such views must take a back seat in her mind. The lifting and pushing of heavy weights must be entirely prohibited. Fully 50 per cent. of the miscarriages to which I have been called have been the result of the woman attempting to lift or push a heavy piece of furniture, often in the course of a spring-cleaning. When one considers that our organs are designed solely for the purpose of fulfilling the function for which they are intended, one realises how it is that displacements of the womb are so common nowadays. The uterus is supported by four pairs of ligaments. Of these, only one pair

is in any way strong, the others being of little practical value when it comes to withstanding a strain. From this and a study of the comparative anatomy of the male and female abdomen, it can easily be seen that the female was not intended for any other than the lighter forms of physical toil. Yet in practically every walk of life women are to be found doing men's work. Our factories are full of women; women hunt, play football, work in the fields, crank up motor-cars and exert a disproportionately heavy strain on their abdominal muscles in a thousand and one different ways. Is it then to be wondered at if a well developed woman, deceived by her external muscularity, in lifting a heavy weight, ruptures one or more of these delicate internal ligaments? These ligaments support the uterus, and if one or more are over-strained or ruptured, the support is materially weakened. A displacement of the uterus, with all the aggravating symptoms attending the condition, is almost certain to ensue. This being so in the non-pregnant uterus, how much greater is the risk of injury in pregnancy!

Riding and motor-bicycling should be given up when conception is established. Dancing, swimming, tennis and equally violent exercise should be discontinued after the third month, and prior to that should only be indulged in in moderation. Walking as an exercise is at all times beneficial, but should not be indulged in to the extent of producing fatigue.

It is commonly believed that during pregnancy there is a more rapid process of dental decay. This is, however, a fallacy which has arisen from the fact that a woman is usually and very wisely advised not

to undergo any dental operations during that period. Naturally, if dental caries is present and is not attended to for nine or more months, the process of decay is rapid. It is this very obvious fact that has given rise to the erroneous impression that the condition of pregnancy actually produces dental decay. The treatment for dental caries in this instance is preventive. The woman should visit her dentist at the commencement of her pregnancy and have all her teeth attended to before the end of the second month. After that month dental manipulations are to be discouraged until after the confinement, on account of the associated shock. From a hygienic point of view it is essential that the teeth should be thoroughly overhauled at the outstart, as bad teeth invariably result in impaired health, and such conditions as neuralgia and dyspepsia frequently owe their origin to decayed teeth.

Mental health is as important as physical health. It is generally agreed that mind and body are inseparable in this respect, and the effect of the mind on the body in disease has recently been the subject of much discussion. There is much wisdom in the old adage that "a light spirit moveth quick," and in pregnancy a cheerful spirit and a happy nature go far towards ensuring a sunny nature in the child. Although there has been considerable controversy on the subject, one feels thoroughly convinced that maternal impressions are conveyed to the child *in utero* in a greater or less degree according to the force of the impression on the mother. The proof in support of this theory is so abundant, that one cannot but feel that those who oppose this view do so from

sheer ignorance of the facts. Undoubtedly the temperament of the child, during its first few years of life at least, is largely determined by the mental state of the mother during pregnancy—the latter months in particular. While recognising that there is no rule without exception, one is safe to conclude that a happy mother gives birth to a bright happy-natured child, whereas a nervous excitable mother gives birth to a moody child, easily upset and quickly frightened. Surely it is every mother's heritage and birthright to bear a happy, sunny-natured infant! So she may, if she model her mind on what she would have her child be, for in no other phase of life is the power of personality so exemplified. It is a time for the exercise of will-power.

All recognised sources of undue excitement should be rigorously avoided, such as exciting melodrama and sensational fiction, which have the tendency to cause emotional disturbances. Much can be done towards maintaining brightness and cheerfulness by those dwelling in contact with the woman. In consistence with the theory of maternal impressions, she should endeavour to avoid as much as possible that which is ugly, morbid and repulsive. If she sees a crowd gather round some accident on the street, she should pass by on the other side. If she sees a person with repellent features, a deformity, skin disease or other unsightly condition, she should immediately avert her eyes. If she is temperamentally inclined to nervousness, every effort should be made to cultivate placidity, for nearly every *trait* in the human character is a habit that can be cultivated.

The expectant mother must have a plentiful diet

of good nourishing food, as she has to provide nourishment not only for her own body but for that of her child in the womb, whose sole nutriment is derived from the maternal blood-supply. Over-rich and indigestible food is to be avoided, as also such food as the mother knows to disagree with her. At least one to two pints of milk should be consumed daily. Good fresh drinking water is one of the most valuable aids to health that we have. As well as being the simplest, it is one of the most efficient means of cleansing the bowels, blood and kidneys. Alcohol, in any other form than light claret or burgundy, should be avoided. Spirits, of course, are strictly forbidden.

The human body, as professional fasters, hunger-strikers and other food-faddists have demonstrated, can survive for an extraordinary length of time without food, but one can only go without sleep for a very limited period. Loss of sleep will kill far sooner than starvation. The pregnant woman requires more sleep than the non-pregnant woman. She should have at least ten hours' sleep every night. Light sleepers and those subject to insomnia should make a point of lying down for an hour each afternoon.

It is surprising how few people know *how* to sleep. Refreshing sleep can only be obtained when every voluntary muscle throughout the entire body is relaxed. Few do this. Almost involuntarily one braces up the muscles of the side on which one is lying preparatory to falling asleep, with the result that after consciousness is lost some of the muscles are unable to fully relax. This is one of the causes of nocturnal cramp. Frequently the mattress is at

fault—either the top mattress or the spring mattress or both. The spring mattress should be of the variety composed of coiled wire springs, which should be drawn fairly tight, and the top mattress should, for preference, be stuffed with sterile horse hair. Feather mattresses, contrary to expectation, are the least comfortable as well as being unsatisfactory from the health stand-point. Even the quietest sleeper requires a certain amount of natural free movement during the periods of semi-consciousness. Feather mattresses restrict these movements. This can be readily seen if the mattress is examined in the morning, when a deep hollow will be found outlining the position in which the body has been more or less fixed through the night.

The pregnant woman should avoid sitting in close ill-ventilated rooms and crowded halls. A free access of air is essential to both health and comfort. A close stuffy room, besides being unhealthy, imparts a feeling of chill. Stuffiness is not warmth. It stands to reason that creatures who owe their existence to the continuous working of a respiratory machine must have a continuous supply of the fuel that the machine consumes. The fuel the lungs consume is fresh air. From the air drawn into the lungs with each intake of breath oxygen is extracted and taken into the blood which circulates throughout the entire body. It is not really an economy to sit in a cold room with no fire and the windows and other means of ventilation tightly closed, in the hope that the body itself will generate heat. It will not. It is by means of the oxygen in the air that the body-heat is naturally maintained. If there is no inlet for a fresh

supply of air, the oxygen in the room becomes quickly used up. The air one exudes or breathes out is of no more use to the body than the perspiration exuded from the skin or the waste material excreted by the bowel. The exhaled air is composed of carbon dioxide, a poisonous gas which is incompatible with life. Now, if several people are congregated in a small unventilated room, the oxygen, as previously explained, is quickly used up and the persons are left sitting in a vitiated atmosphere chiefly composed of the poisonous carbon dioxide gas emitted from their own bodies. This is the explanation of the headaches and faintness felt in such circumstances.

In order to obtain a continuous current of fresh air in a room the window must be kept open from the top. In small rooms, where several people are congregated, it is not enough to have the window open at the top only. It should be pushed up a few inches from the bottom as well. The door should be kept closed. According to the laws of heat, the heated air in a room rises to the ceiling. If the window is open top and bottom, the over-heated and used air rises and escapes from the room by the top opening, while fresh air comes in through the bottom opening and takes its place. In this way a constant supply of fresh air is maintained. One is aware that, owing to the faulty construction of many present-day houses, it is not always possible to have the windows open at the bottom as well as at the top, on account of the draughts caused by the fire-place and door being built in the wrong places. Where such conditions exist there is no reason why the window should not be kept open at least a few inches from the

top and so allow the used air to escape. The cool incoming air will naturally sink down in the room and replace the over-heated air as it rises. Even on the coldest day the window should be open a few inches at the top, and if necessary a fire can be lighted to warm the fresh incoming air.

Municipal and other authorities, in their praiseworthy efforts to eliminate disease, have been subjected to much criticism by their insistence on the adequate ventilation of public buildings. One has seen many cases of chill wrongfully ascribed to an open window. It is not proposed to argue the point beyond what has already been written. The public will never be educated by force. Facts are more instructive and have more weight than argument. Fresh air and draughts are two widely different things; the one health-giving, the other death-dealing. Provided the body is properly clad, fresh air cannot produce a chill; draughts can. A window open at the top will not produce a draught unless the door is open.

IV

THE INDIVIDUAL SYMPTOMS OF PREGNANCY AND ASSOCIATED FUNCTIONAL DISTURBANCES

After the cessation of menstruation, morning sickness is possibly the commonest initial symptom of pregnancy, and is usually experienced from the second to the fourth month. It varies from a mere feeling of nausea to actual attacks of vomiting. It occurs regularly after rising from bed in the morning. The nausea, however, soon passes off. The treatment for it is, under normal circumstances, a very simple and effective one. Do not get out of bed until some food is taken. If a cup of tea is drunk and a few pieces of bread and butter eaten with it before rising, the feeling of nausea, if not actually absent, will be greatly minimised. The more luxurious method consists in having breakfast in bed. By advising this simple procedure, the author has had several women under his care who have never even experienced one attack of morning sickness. Should vomiting occur to any appreciable extent *after the fourth month*, the woman should consult her doctor without delay.

From the commencement of pregnancy onwards changes occur in the breasts. A feeling of fullness and

tenderness like that associated with menstruation is often felt in the early stages. This is all the more marked during the first "missed" period (*i.e.* the date which would normally correspond to a menstrual period), when occasionally all the discomfort of menstruation, excepting the discharge, is experienced.

From the second month the breasts enlarge. The pinkish area of skin around the base of each nipple, known as the *Areola*, becomes wider and darker in colour. About the third month a clear fluid may exude from the nipple, which becomes more prominent. This fluid, the precursor of milk, becomes white as the months pass by. At the fifth month there is a still wider extension of the area of pigmented skin around the nipples, and by the time the baby is ready to come, the areolae in women of dark complexion are stained a deep brown colour. The clear rose pink shade of the virgin nipple is never seen again.

It is to be particularly impressed that every effort should be made to nurse the baby on the breast. Mothers' milk is the food *par excellence* for the infant, and every means should be adopted to assist nature in its production. By a special process it has been possible to subject human milk to a close analysis, and with the advance of science artificial foods have been prepared which closely simulate mothers' milk, both in regard to the constituents and their individual proportions. But all artificial foods fall short of the genuine article. Mothers' milk possesses an unanalysable immunising quality which affords the infant a certain degree of protection against disease. It might be regarded as a first line of defence against

harmful invading organisms. Further, it is graded day by day to meet the child's requirements in a way that no artificial food could simulate.

During the ninth month the nipples should be drawn out gently each day and sponged with a piece of cotton-wool soaked in methylated spirit or eau-de-Cologne. This prepares them for usage by the infant. During pregnancy, no clothing should be at all tight round the breasts, and if corsets are worn high the upper part should be very loose. Towards the end of pregnancy a bust-bodice is to be recommended for comfort.

After the fourth month the abdomen commences to show signs of distension. The rate of growth is regular, and is evidenced by the fact that the mother requires to let out the waist-band of her skirt at intervals. The disfigurement caused by the enlarged abdomen becomes more and more marked. The mother is particularly cautioned against any attempt to conceal her condition by tightening her corsets or clothes. Besides being a futile practice, it is an exceedingly dangerous one. There are many "maternity" garments advertised, which, although in no way reducing the figure, are designed in such a manner as to effectively disguise the condition. At the sixth month the mother should lay aside her costumes, as the continued widening of the skirts becomes increasingly ineffective after this date. Gowns and dresses should be worn instead. High waists and loose flowing skirts with panels or pleats are effective in detracting attention from the figure.

During the last few weeks of pregnancy the feeling of weight increases as the womb commences to sink

down in the pelvis. Particularly where there are varicose veins or troublesome constipation, a certain amount of relief is obtained by wearing a pillow-slip or broad bandage lightly swung around the lower part of the abdomen, in such a manner as to form a sling in which the bulging part is supported. It is not recommended to have a special sling cut out and made for this purpose, as the " swelling " is constantly changing both in regard to shape and size.

At about four and a half months the mother begins to feel the movements of the baby in her uterus. The early movements are somewhat similar to attacks of painless flatulence. This condition is termed the " Quickening," or, as it is sometimes called, " Life." These foetal movements become more pronounced as the pregnancy proceeds, and later they can actually be felt by a hand placed on the abdomen.

Any existing Piles or Varicose Veins are particularly liable to give rise to discomfort during pregnancy. One considers these together, as they are, practically speaking, the same condition, the only essential difference being in the site of the varicosity. Strictly speaking, a varicose vein may occur in a number of different places, but one usually uses the term solely in reference to a varicose condition of a vein in the leg, whereas a true pile is a varicose vein in the rectum or lower bowel. The mechanism producing both conditions is the same, and consists of external pressure on the large veins of the pelvis. This causes the flow of blood in the small veins to be retarded. The internal pressure in these veins being thereby increased, portions of the walls yield and become gradually distended like little balloons. The commonest

causes of external pressure on the large pelvic veins are habitual constipation and the heavy enlarged uterus in pregnancy. The formation of one or other condition is facilitated if constipation and pregnancy co-exist. As already mentioned, any pre-existing piles or varicose veins are aggravated by pregnancy. The varicose veins become more swollen and painful and the piles become larger and more apt to come down, particularly if the bowels are allowed to be at all costive. In such case the piles should on each occasion be bathed with luke-warm water and replaced with a clean finger. They tend to come down if there is any straining at stool or if the woman continues to keep on her legs after she is fatigued. Relief is frequently obtained by the application of gall and opium ointment, which can be obtained from any chemist. Before applying the ointment the piles should always be cleansed with luke-warm water. In cases where haemorrhage occurs and is not corrected by the ointment of galls, the bleeding may be arrested by the use of either witch-hazel or tannic acid suppositories. For the benefit of those unfamiliar with their use, it may be stated that a suppository is a medication so shaped that it may be easily inserted into the back passage, where it becomes dissolved by the heat of the bowel, thus allowing the contained drug to act.

The treatment of varicose veins consists chiefly of rest and elevation of the affected leg. The sufferer should avoid standing about, and when seated should keep the leg raised up on a stool to facilitate the venous circulation. To avoid the occurrence of a varicose ulcer and also in cases where it has already

formed, it is desirable that the affected part be kept as dry as possible. The application of a dusting powder will be found helpful in this respect. A simple powder, which has the advantage of being mildly antiseptic, can be prepared by mixing equal quantities of boracic powder with powdered starch. The resulting mixture should be kept in a tin in a dry place. The most efficient and economical method of application is to fill a clean new pepper-castor with the powder and shake it on to the affected part. Before rising each morning the woman should raise the leg to allow the excess of blood to drain out of the vessels. After applying the dusting-powder, the raised limb should be bandaged from the ankle upwards, so as to completely cover the varicose part of the veins. The bandage is worn throughout the day, thus giving support to the weakened walls of the blood-vessels, and is removed after retiring to bed at night. Such bandages should be made of elastic woven material, and should be worn comfortably tight. Plain rubber and perforated rubber bandages are not to be recommended, as they cause retention of the perspiration and other skin secretions. This retention of the secretions means that the skin is kept perpetually moist, thereby increasing the liability to ulceration. One cannot recommend elastic stockings, although they are undoubtedly simpler to apply and easier to keep up. Besides being very much more expensive, they soon become utterly useless through stretching, whereas an elastic woven bandage can be tightened or loosened at will.

Occasionally the veins of the outer genitals become varicose and give rise to much itching and discomfort.

The itching is sometimes so acute that the use of a sedative lotion is called for. In such a case the woman should inform her doctor of the condition. In mild cases, considerable relief may be obtained by the application of the abdominal sling already described.

In all cases of piles and varicose veins, a daily evacuation of the bowels is of prime importance.

As the baby grows and enlarges in the uterus the weight of the organ is naturally increased, and the uterus sinks in the abdomen. In this way pressure may be brought to bear on various structures. The enlarged uterus may press on the bladder, giving rise to a continual desire to pass water, and it is found that only dribbles can be passed at a time. Incontinence or inability to retain the urine is occasionally experienced. This condition, which also owes its origin to pressure, may give rise to considerable annoyance. From the same cause acute constipation frequently arises even in women who have previously been regular.

About the fourth month the uterus commences to rise in the abdomen, and all these symptoms arising from pressure tend to disappear only to return again when the uterus finally sinks in the abdomen towards the close of pregnancy.

Partial relief from the foregoing pressure symptoms may be obtained by the application of the abdominal sling. Complete relief, however, is not experienced until the baby is born and the uterus thereby relieved of its unusual heavy burden.

Heartburn frequently gives rise to much discomfort during the last three months of pregnancy. As in

the case of the other pressure symptoms described, the cause of heartburn is entirely mechanical. At the seventh month the uterus, having risen high up in the abdomen, tends to press against the stomach when that organ is dilated with gas or food. This abnormal pressure results in disturbances of the digestion, and by far the commonest symptom is heartburn. Temporary relief may be obtained by taking small pinches of carbonate of bismuth or by sucking small pieces of black sugar. A favourite remedy consists in dissolving a pinch of bicarbonate of soda (baking soda) in half a tea-cupful of boiling water and sipping a few mouthfuls before meals. It is found, individually, that certain forms of food tend to increase the frequency of the attacks. With some persons, potatoes may be the aggravating factor, with others it may be too greasy food. Total relief, however, need not be looked for until the last few weeks of pregnancy, when the uterus commences to descend again into the pelvis.

V

THE LAYETTE AND OTHER NECESSITIES

EARLY in the pregnancy the expectant mother should commence to make preparations for her baby's arrival. In regard to the clothes, most women are advised by their mothers or other married relatives. It is essential that the baby's clothes should be of light warm material. Many firms offer complete sets of baby-clothes or "layettes," as they are called, the prices ranging according to the number of articles and the material. Without doubt, this method of acquiring the layette is the easiest and speediest, but the woman with limited means at her disposal will find, if she possesses average proficiency with her needle, that she can make a great many, if not all, of the baby's clothes at home. She will find also that she has a delightfully interesting pastime which the woman who purchases the ready-made layette denies herself.

It should be borne in mind that it is almost as great a mistake to have *too many* clothes as it is to have too few, as the baby will rapidly outgrow its first clothes in the course of a few weeks. It must also be remembered that little jackets and other articles of clothing are favourite gifts to the mother and child.

One would advise the young mother to have ready a supply of clothes more or less in accordance with the following list:

3 strips of flannel—for binders. Later these can be substituted by little Jaeger belts, which are obtainable in all sizes.
3 little woollen or silk and wool vests.
3 flannel barries.
3 day gowns.
3 night gowns.
2-3 woollen jackets.
2 good woollen shawls.
1 large shawl for out-of-doors.
2 dozen large napkins of Turkish towelling.
½ dozen flannel squares—to go over the infant's napkins.
1 cake Castile soap.
2 oz. bottle of olive oil.
1 tin of baby powder. The dusting powder prepared by Messrs. Johnstone & Johnstone (New Brunswick) is to be particularly recommended, as it does not tend to cake.
A packet of large safety-pins—choose pins with a secure catch.
1 small soft sponge—preferably a Turkish sponge. Steep the sponge in a solution of salt and water (one teaspoonful of common kitchen salt to one pint of water) in order to extract the grit.
1 small baby bath.
2-3 soft towels—preferably of Turkish towelling.
1 lb. packet of aseptic cotton wool or gamgee.

The mother should prepare beforehand about two

dozen "belly-rags." These consist of squares of clean soft white rag, preferably linen, each about 4 inches square. An old washed-out linen handkerchief serves this purpose excellently. The "belly-rag" is used to protect the child's cord from injury and damp during the five to ten days following birth. The material used in making these rags should first be thoroughly washed, then boiled. It is then dried and cut up into 4-inch squares. The hands should be well washed and the scissors boiled before using, in order to ensure sterilisation. A hole about the size of a shilling is cut in the centre of the rag. The two dozen rags are then wrapped up in the remaining piece of boiled cloth and are put carefully away amongst the baby's first clothes.

In regard to the infant's cot, it is quite unnecessary to go to any expense. All that is essential is that the child's bed should be safe and secure, light in weight, well ventilated, and placed out of the way of draughts. A light basket of the "bassinette" type answers most of these requirements. It can be effectively trimmed at home, and should be placed on a low table or box. It is to be strongly emphasised that a baby has its own bed. The popular idea that the baby should sleep with its mother for the sake of warmth is entirely fictitious. Moreover, it is an unhealthy and dangerous practice. Large numbers of infants have lost their lives through "over-laying," *i.e.* the mother, while asleep, lying over on top of the child and suffocating it. This accident is, unfortunately, only too common. In exceptionally severe weather, a hot-water bottle, wrapped up in flannel, can be laid at the foot of the child's bed.

The infant's bedding should consist of :

A mattress.
A waterproof sheet. The sheet used on the mother's bed during the confinement can be washed and used for this purpose.
An old piece of flannel, doubled or trebled.
A little feather pillow and pillow-slip.
Two light warm blankets.
A small eider-down quilt.

An extra piece of blanket can be added if the weather is unusually severe, or if for any other reason additional warmth is required.

To be prepared is to be fore-armed. The adage is an apt one in midwifery. All the necessary articles should be gathered together some time before the date when it is expected they will be required. As in the case of the layette so it is with the accouchement outfit. This may be purchased with the various articles neatly packed in fancy boxes or bottles as the case may be. All that is really necessary for the mother's comfort and convenience may be bought for a few shillings from any chemist. Many nurses have the unfortunate habit of handing the expectant mother a list of articles to be purchased, many of which are quite unnecessary, and are never used.

The following very modest list includes all that is really necessary :

Several sheets of strong brown packing paper.
One maternity mattress.
One maternity waterproof sheet.
One pot of vaseline.

One small bottle of " Lysol."
One yard of tape or one hank of unbleached linen thread.
One enema tube (Higginson's pattern).
One slice of common yellow soap for use with above.
One pound packet of aseptic cotton wool or gamgee.
One china bed-pan (slipper pattern).

VI

THE PREPARATIONS FOR THE CONFINEMENT

Choose the brightest and cheeriest room in the house for the occasion. Where circumstances permit, it is a great saving to have all the arrangements made long beforehand, so that when the labour commences there is no excitement or confusion.

Some time prior to the date on which the room is expected to be used, it should be thoroughly cleaned out. The carpet should be lifted, taken outside and well beaten. The walls should be sponged down and all articles of furniture should be rubbed over with a damp cloth. All superfluous ornaments and knick-knacks should be put away during the confinement, as they merely gather dust, and so give extra work to the nurse or other person who has to dust them daily. Where there is dust, germs thrive. Germs cause infection, and neither the mother nor child is fitted to withstand infection. I do not mean to suggest that the room should be modelled on the plan of an operating theatre; far from it, for the mother should, at this time, be surrounded with such pictures, flowers and ornaments as she likes. But in every room there are at least a dozen articles which,

at such a time as this, can be put away without being greatly missed.

As the date of confinement approaches, the mother should have in some easily accessible place those articles of clothing, etc., which will be required immediately after the birth. The following list is suggested :

One binder.
One vest.
One barrie.
One nightgown.
One shawl.
One woollen jacket.
½ dozen napkins (Turkish towelling).
2-3 flannel napkins.
A packet of safety pins.
A pot of vaseline.
The baby's dusting powder.

The nurse should be told previously where everything is to be found when required.

A few days before the baby is expected it is a wise plan to air the child's bedding and first clothes before a fire.

The bed which the mother intends to use during her confinement should be as low as possible. A plain iron bed without any hangings is best. On the day when the baby is expected two layers of the strong brown paper should be inserted beneath the bolster sheet. On top of the latter the waterproof maternity sheet is spread so as to extend from the woman's waist to her knees when she is lying in bed. Both should be on the *right* side of the bed, the edges of the

paper and of the waterproof sheet being brought slightly over the edge and tucked under the mattress. The other side of the waterproof sheet may be fixed to the mattress with safety pins. The object of the brown paper is to save the mattress from getting soiled should any mess get over the maternity sheet. If a gamgee maternity mattress has been purchased as well, it should be placed on the top of the waterproof sheet.

The bed should stand in a position well lit by the window, and such that the woman's hips will face outward towards the attendant when she is lying on her left side. At the head of the bed a small steady table should be placed, on which can be arranged the tape, safety pins, and two boiled bowls for the use of the accoucheur. Wheel the washstand conveniently near the bed, and have on it a large basin, the bottle of "Lysol," soap and a nailbrush for the attendant's hands. In all probability he will bring a sterilised nailbrush in his bag.

The nursing-chair, that is, the chair on which the nurse sits to bath and dress the infant, should be as low as possible. The seat should be about a foot from the ground. An old kitchen chair with a few inches sawn off the legs serves the purpose admirably, provided it is steady and secure. This chair should be drawn up at the side of the fire, which should be lighted at the first signs of labour. A tray or stool should stand conveniently near to hold the following :

The baby's soap and sponge.
A small bottle of olive oil.
A pot of vaseline.
Cotton wool.

An egg cup containing a pinch of boracic acid crystals. When required this can be filled up with luke-warm water. The resulting boracic solution is used to bathe the baby's eyes after delivery.

The tin of baby powder.

A packet of safety-pins.

The following articles should be over a screen or chair before the fire :

The baby's clothes.

The baby's towels.

A large pillow-slip—to be used as a binder for the mother.

One or two soft diapers for the mother's use.

A clean nightgown for the mother.

A clean under-sheet for the bed.

A " belly-rag."

A clean piece of old flannel or blanket on which to place the baby when born.

The coal scuttle must be filled up. One or more large kettles or pots, full of water, should be placed on the fire, and several large jugs of water on the hearth with which to replenish the kettles.

VII

THE CONFINEMENT

In the uterus the baby is inside a bag of membranes which is attached to the placenta or after-birth, which, in turn, is attached to a side of the uterus. This bag is filled with a fluid (*liquor amnii*), which acts as a water-cushion and protects the baby during pregnancy by minimising shocks, such as bumps and falls sustained by the mother. Coiled up inside the bag is a twisted cord composed of veins and arteries, the whole strengthened by a firm jelly-like substance. The cord is attached at one end to the placenta and the other end enters the baby's navel. The veins and arteries of the cord are continuous with the veins and arteries of the placenta, and by the adhesion of the latter to the uterus they are kept in continuity with the mother's blood-vessels. It is in this way that the child in the uterus receives its circulation and nourishment from the mother.

The onset of labour is usually marked by a slight pinkish discharge, composed of blood and mucus, termed "The Shows." This can generally be taken as an indication that things are on the move. It is not caused, as is popularly supposed, by the bursting of the Bag of Forewaters, but is due to a slight separa-

tion occurring between a portion of the membranes and the corresponding wall of the uterus. The escaping blood finds its way out of the womb by passing between the uterine wall and the unruptured Bag of Forewaters.

About this time vague pains occur at more or less irregular intervals. As time goes on the pains become more definite in character and more regular in frequency. At the same time the intervals between pains become gradually shorter.

With the first sign of labour the woman should take a dose of castor oil, followed by a cup of hot tea or milk an hour later. There are at least three definite reasons for clearing out the bowels at the commencement of labour:

1. It tends to hasten on the labour and so save the mother's strength.
2. It facilitates the birth of the child's head—normally the largest part to pass—when the bowel is flat, as it is when empty.
3. It minimises the chance of an evacuation of the bowels taking place just as the child's head is being born.

The " pains " of labour correspond to contractions of the uterus, and it is by these contractions that the uterus expels the baby. The mechanism may be compared to a person straining at stool during the passage of a large hard motion. Each time the person presses the motion is squeezed slightly downwards. The essential difference in the two actions is that in the case of the person straining at stool the action is voluntary, whereas in labour the contractions

are involuntary, that is to say, the woman has no control over them—she is incapable of increasing or decreasing the pains.

The typical *true* labour pain commences in the small of the back and passes round the sides of the abdomen in a downward direction towards the loins. As labour goes on these pains become more frequent and regular, increasing in severity, until the child is born. The birth of the child brings complete relief save for a mild pain or two during the passage of the after-birth.

The doctor should be *warned* at the onset of these pains and *sent for* when they become fairly frequent and regular. Until such time as he arrives, a certain measure of relief can be obtained by some person applying firm pressure to the small of the mother's back. She should be encouraged to bear down during a pain, while she pulls upon a towel securely fastened by one end to the head of the bed and presses her feet against a stool or box placed at the foot.

As a rule the woman should not go to bed until the last possible moment unless the physician, having examined her, finds the os or entrance to the womb fully dilated, and therefore advises her to lie down. Otherwise, she should move about the room as long as she feels able to do so. By doing this she aids dilation of the os by making use of the laws of gravity. Besides which, the pains are usually easier to bear in the upright position.

In regard to the actual pain borne by the woman, it varies greatly in different individuals. Some suffer considerably, while others scarcely complain. As a general rule, first babies cause most suffering. The

author has had more than one case where a *Multipara*,[1] after two or three severe pains, delivered herself of a child before he had time to reach her house.

As already explained the "pains" of labour are involuntary contractions of the uterus. By these pains the baby inside is projected downwards against the os. A portion of the membrane containing the fluid projects through the opening of the womb. Each pain increases the pressure of the fluid, and the projection ultimately passes, like a blown-up balloon, through the little opening into the vagina. The projection of the membrane containing fluid is what is known as the Bag of Forewaters. As the pains go on this bag gradually dilates the os until it is fully open, and the uterus and vagina become continuous with each other. Usually at this stage the Bag of Forewaters bursts, and with the downward rush of fluid the baby's head is swept into the opening made by the bag. As the pains continue the head comes down into the vagina. This constitutes what is termed the "Second Stage" of labour. The baby with each successive pain or contraction is brought down the vagina, out through the opening of the vulva, and so is born.

Although born, the child is still connected with the mother by means of the cord. The cord can be felt beating like an artery, and is said to "pulsate." In the event of the child being born before the arrival of the doctor the mother should be immediately placed upon her back. When the cord has ceased to pulsate, it should be securely tied in two places with tape. The first tie should be made about one

[1] A woman who has already borne a child.

and a half inches from the child's navel, the other about two inches nearer the mother. The cord is then cut between the two ligatures (tapes) with a pair of scissors which have been previously *boiled.* The hands, nails and forearms of the attendant should be thoroughly scrubbed at the very outstart with soap and warm water in which Lysol has been dissolved in the proportions of one teaspoonful to the pint of water.

The placenta, with membranes and cord, constitute what is known as the " After-Birth," which is usually expelled from the womb within one hour from the time the child was born. In the event of the after-birth coming away before the doctor's arrival, it should be placed entire in a soup plate or other convenient receptacle, *and kept for the doctor's inspection.*

After the child is born the mother generally experiences some rigor. Her teeth chatter, she shivers spasmodically and complains of feeling chilled. She should be kept covered up as much as possible. A hot water bottle wrapped in flannel should be placed at her feet, and others, if available, on either side of her body.

I do not propose to enter into any description of the cleansing of the external genitals after delivery of the child, as this can only be competently performed by a doctor or a trained midwife.

After the maternity sheet and brown paper have been removed from the bed, a warmed diaper is applied between the mother's legs. The pillow-slip which is to be used as a binder may then be slipped beneath the small of the mother's back, applied

round the abdomen and fixed in place by several large safety-pins. The binder should reach from an inch or two beneath the breasts to the centre of the hips. It is only necessary to have the binder drawn comfortably close ; on no account should it be at all tight. It is perhaps as well to mention here that there is no actual necessity for the binder. It is merely a luxury. It imparts to the woman a sense of comfort and security such as is obtained from a bandaged finger. The old belief that the binder was essential in order to maintain the figure is now an exploded fallacy. The secret of preserving one's figure is in not getting up out of bed too soon after the birth, but I shall refer to this again later.

If for any reason it is undesirable or if it is not possible for the mother to nurse her baby, a second binder should be firmly applied around the breasts and fixed at the side of the body by several large safety-pins.

The mother should be cautioned to lie as still as possible on her back for the remainder of the day or night. If chloroform has been administered the effects pass off quickly as a rule, and the mother can be given a cup of warm tea as soon as she asks for it. The head can be raised and supported while she drinks the tea.

My frequent allusion to " pain " in reference to labour need cause no alarm. I have used the word almost exclusively in its technical sense to define the propelling power of the baby in the womb, and might equally well have used the word " contraction " but for its ambiguity. Nowadays, with the freer use of chloroform anaesthesia, a woman may have her

baby with the extreme minimum of pain. A greater boon than chloroform has proved itself to be in child-birth will be difficult to discover. While acknowledging the existence of other means of rendering labour painless, one is forced to admit that there are none as yet in universal use that offer the same degree of safety to mother and child. It enables a woman to have her baby without fear, with the minimum of pain and the maximum of safety. With its use the modern woman need never experience what our forebears termed the "Agony of child-birth." Women who have once experienced it, properly administered, will never allow it to be withheld on subsequent occasions. It is a common experience nowadays for a woman, when engaging her doctor, to ask him the question—"Do you give chloroform?" and if he is sufficiently old-fashioned as to deny her this essential, the knowing woman will speedily turn to a more up-to-date obstetrician.

VIII

AFTER THE DELIVERY

When the baby is freed from its mother, the doctor, having satisfied himself that its breathing is regular and that it can be left alone with safety, will require at this stage to give all his attention to the mother. In the absence of a professional nurse, the woman in the room must be prepared to receive the newly-born infant. If her services are otherwise required by the doctor, she should wrap the infant in a piece of old blanket and lay it in a safe place near the fireside. The child will lie alone quite safely.

The child's eyes must be attended to as early as possible. Dip a small piece of cotton-wool in the boracic solution, prepared as previously described, and gently bathe the eyes. Then wrap a fair-sized piece of cotton-wool round the little finger of the right hand, and, after dipping into the solution, thoroughly sponge out the mouth. The nose should then be cleared. Moisten a small piece of cotton-wool, twist to shape, and clean out each nostril in turn. This should be repeated daily, previous to the child's bath.

The water for the infant's bath should be comfortably warm, and should always be tested first with

the elbow. Remember that the skin of an adult hand is much coarser than that of a newly born child, and can therefore stand a much higher temperature.

At birth the baby is frequently covered from head to foot with a white substance of the consistence of cream-cheese, known as the *Vernix Caseosa*. This substance is particularly thick where there are creases in the child's skin, such as behind the knees, in the folds of the groin, under the arms and in the folds of the elbow-joint. It is not easy to clean off the vernix with soap and water alone, but if the child's body is first of all gently rubbed over with a little warm olive oil it will be found to wash off quite easily in the bath.

The newly-born child is not in immediate need of food. The mother's breasts will not as a rule be able to supply nourishment to the child for at least three days. During this period the child may be spoon-fed on a mixture made up of one-third milk and two-thirds water, with the addition of a pinch of sugar. If the mother's condition permit, the child may be put on the breast on the second day. Although it will in all probability receive no milk, the mere suckling alone, besides stimulating the breasts to secrete and encouraging the child to suckle, assists in the contraction of the womb which is taking place at this time. If a child is entirely spoon-fed for a few days it will lose the instinct to suckle.

The child's napkin should be carefully watched for the passage of urine and of faeces. If the child fails to pass either one or other during the course of the first twelve hours, the doctor should be notified.

The mother should have a dose of castor oil on the morning of the third day following the confinement. After the purgation, it will usually be found that the nipples commence to secrete milk freely if they have not already done so. Thereafter the child should be put on the breast at regular intervals. The first milk that the breast secretes is known as *colostrum*. It acts on the child as a laxative, and helps to clear out of its bowel the remainder of the substance (*meconium*) with which it is filled at birth. The time-honoured custom of administering a dose of castor-oil to every newly-born infant is a quite unnecessary and rather cruel proceeding, as the colostrum does all that is required in this respect and without the griping so commonly associated with castor oil.

In regard to the mother's food, she should have a plentiful milk diet for the first three or four days. On the fourth day, under normal circumstances, the author allows a return to ordinary diet, with the exception of potatoes, which are a common source of flatulence to those confined to bed. In addition to the ordinary diet, at least two pints of fresh milk should be consumed daily. On the fourth day, where there is no contra-indication such as stitches, the author advocates propping the mother up in bed almost into the sitting position. This posture, usually welcomed by the patient, assists nature in promoting freer drainage of the passages.

If the mother becomes constipated a soap and water enema should be given. Further dosing with medicine is to be deprecated, on account of the risk of driving away the milk. There is also the danger of producing diarrhoea and gripe in the infant, as all medicines taken

by the mother are conveyed to the child through the milk.

It has already been stated, that the application of a binder to the mother's abdomen after delivery of the child is a comfort, but that it in no way affects the figure. The reason why some mothers exhibit a "pot-belly" is that they rise up from bed too soon after the confinement. One has heard a woman *boast* of getting up on the third day. It is difficult to see exactly what there is to boast of in prejudicing health. A woman should remain in bed for *at least* ten days after delivery. The parts concerned have been subjected to an enormous amount of stretching by the passage of the child, and naturally the ligaments are in a weakened condition. Time is required to allow the parts to regain their normal state, in fact, it is fully three months before they do so. If women would but appreciate this fact, many of the troubles complained of subsequently would be avoided.

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